VIDEO ARRAIGNMENT
PHASE ONE REPORT

August 5, 2002

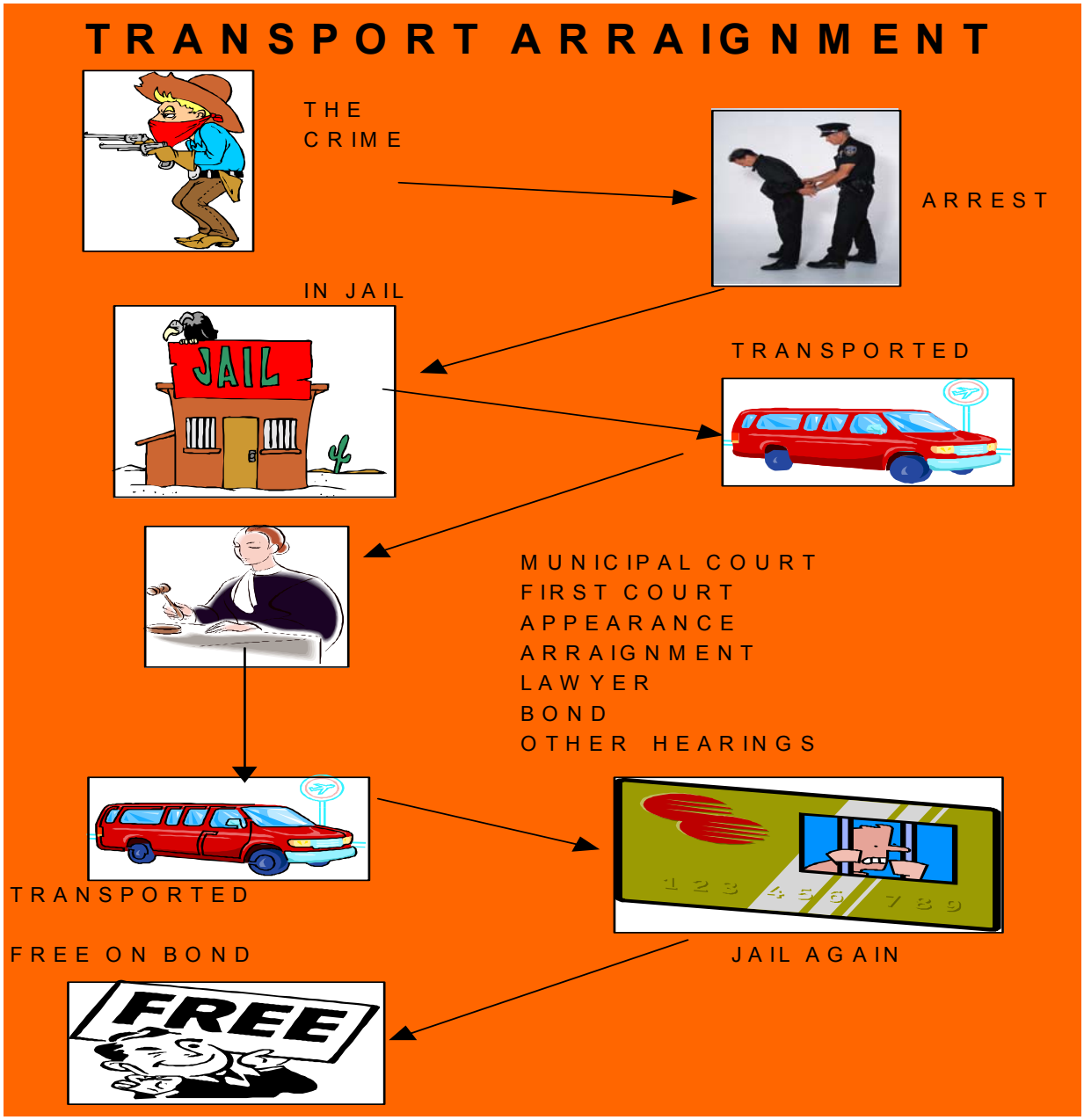
INTRODUCTION

The use of video arraignment in courts nationwide is expanding rapidly. In 2000, the Supreme Court of Ohio reported that 82 common pleas and municipal courts were using video arraignment systems. Bowling Green Municipal Court installed the technology in 1993. Legal precedents for use of video technology in preliminary criminal matters are well established in Ohio. The technology, which can be used for a variety of courtroom procedures, has proven to be a valuable tool to help conserve law enforcement, court, and corrections system resources. The Board of Lucas County Commissioners has requested that the Criminal Justice Coordinating Council conduct a feasibility study for the implementation of this technology in Lucas County.

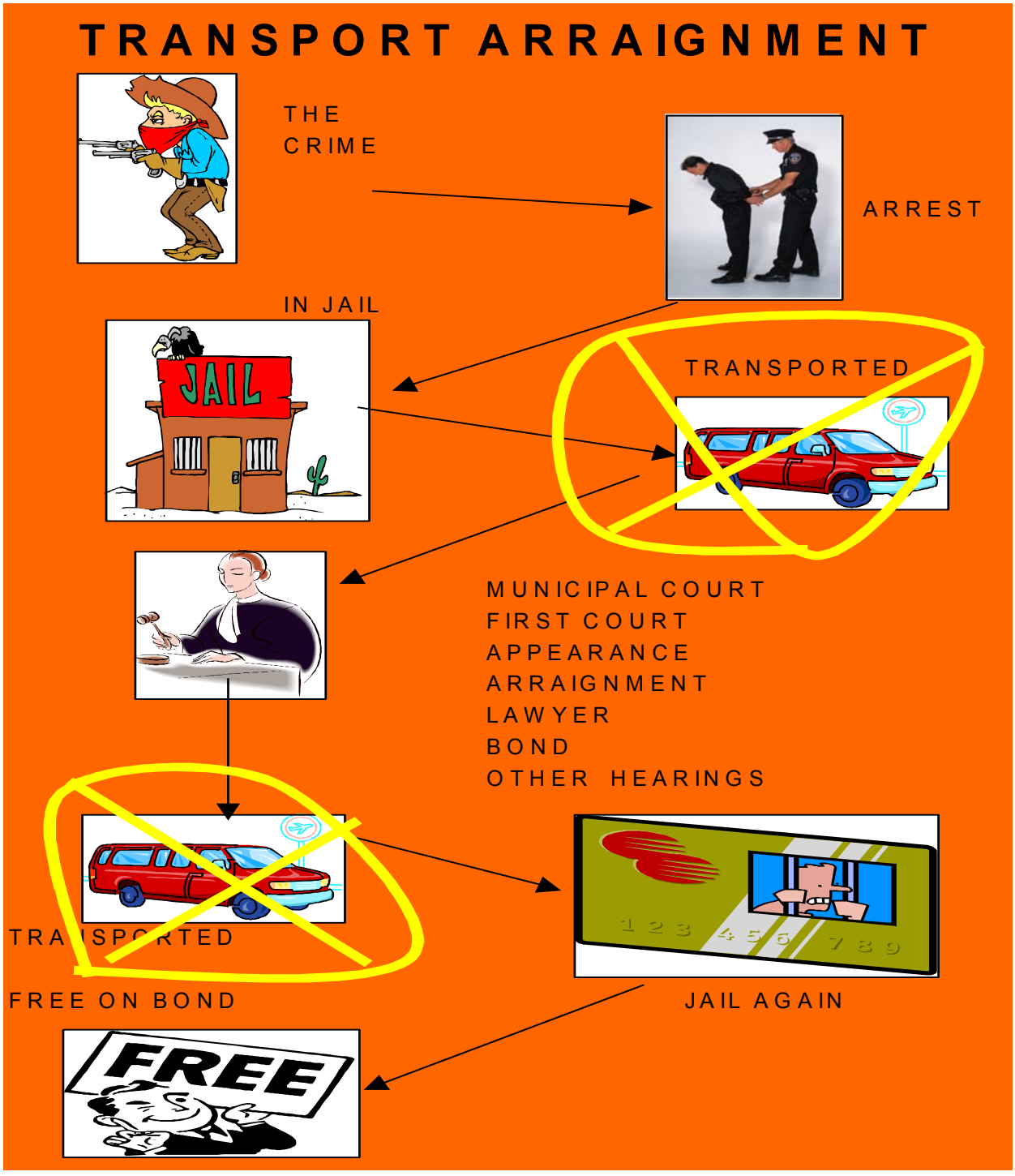
The feasibility assessment will be accomplished using a two-phase approach. Phase One recommends the installation of a video link between the Maumee Municipal Court and the Lucas County Corrections Center (LCCC) as a pilot project. Phase Two will consider the implications of using this technology at all levels of courts and law enforcement in Lucas County, based on the documented results of the pilot project.

CURRENT PROCESS

After arrest and booking at the LCCC, prisoners are transported to the municipal court for their first appearance, arraignment, setting of bond, appointment of counsel, and scheduling of additional court proceedings. The following flowchart depicts the major steps in the process.



With a video arraignment system, most prisoners are no longer transported.



BENEFITS

The use of a video arraignment system significantly affects procedures in the criminal justice system and results in a number of benefits.

- The number of defendants transported to court would be reduced. The Lucas County Sheriff's Office (LCSO) would save personnel time and costs associated with the use of transport vehicles.
- Fewer defendants would be required to appear in court for minor offenses, which would save court personnel time.
- Attorneys would save time spent waiting in court for their clients. Prisoners could be available on shorter notice for any type of hearing or conference.
- Probation officers could conduct pre-sentence investigations and probation violation interviews from their office using video technology, rather than traveling to the LCCC or having an inmate transported to court.
- The amount of time prisoners spend in jail waiting for court proceedings would be reduced, opening up valuable bed spaces at LCCC. Associated per diem costs for each inmate would also be decreased.
- The level of security would be improved for potentially dangerous defendants.
- The possibility of prisoner escape, exposure to contraband, transport traffic accidents, other personal injury liabilities would be reduced.
- In the future, service delivery for medical consultation, psychiatric evaluation, and general education training could be improved by the use of the video conferencing technology.

The remainder of this report will discuss observed traditional court proceedings in Maumee, video court proceedings in Bowling Green, cost considerations, equipment, signal transmission methods, and security issues.

MAUMEE MUNICIPAL COURT PROCEEDINGS

Maumee Municipal Court proceedings were observed on July 11, 2002. The court conducts first appearance and arraignment sessions for in-custody defendants on Tuesday and Thursday of each week. Defendants who are unable to make bond are held at LCCC until their court appearance. Inmate transportation is provided by the LCSO.[1]

On the observation day, four LCSO deputies and two vans were required to transport ten custody defendants to court. The deputies began preparing prisoners for transport at approximately 7:00 a.m. Proceedings for the ten custody defendants began at 10:00 a.m. and lasted one hour. One transport van returned to the jail at approximately 11:45 a.m., following the court session. The second transport van returned at approximately 3:00 p.m. An hour was spent reintegrating prisoners that were not released by the court.

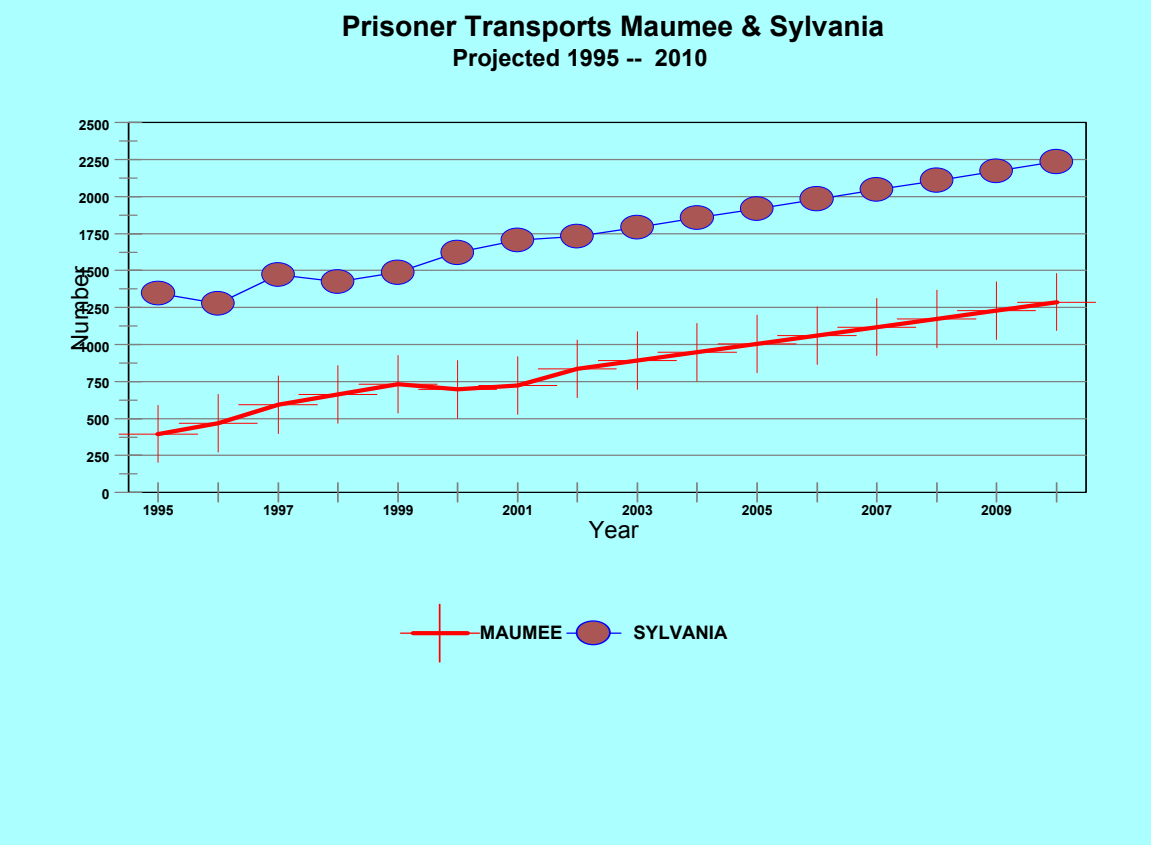
In addition to court and LCSO personnel, there were four employees of the Public Defender's Office present on July 11. The Probation Department also interviewed in-custody defendants at the courthouse.

Forty percent of the custody defendants were brought to court on a bench warrant due to an unpaid fine or court cost. They were each given an Own Recognizance bond and additional time to make payments. Twenty percent of the defendants were brought to court from the Corrections Center of Northwest Ohio

[1] LCSO also provides inmate transportation for Sylvania and Toledo Municipal Courts and Lucas County Common Pleas Court. The City of Oregon transports prisoners for Oregon Municipal Court.

(CCNO) for a pretrial status conference.[2] Both cases resulted in a continuance. The CCNO inmates were transported by bus from CCNO to LCCC and then to Maumee Municipal Court.[3] All of these cases would have been ideal for video arraignment, making transportation unnecessary.

The number of prisoners transported to Maumee Municipal Court has grown considerably. In 1995, LCSO transported 398 individuals for Maumee. In 2001, that number rose to 725, an 82% increase in seven years. With the growth in population and commerce in southern Lucas County, one can safely assume that the rate of increase will continue. It is projected that by the year 2010, the number of prisoners in need of transport will increase by 233% over 1995 (see charts below).



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[3] Presently, the CCNO bus arrives at LCCC between 7:45 and 8:00 a.m. daily and returns to CCNO at 12:00 noon. Monday through Friday, a second bus run arrives at LCCC to pick up the final prisoners at 6:00 p.m. In 2001, approximately 10,000 prisoners were transported between CCNO and LCCC.

The following charts provide actual and projected transport figures and depict the percentage increase by the year 2010 for both Maumee and Sylvania.

PRISONERS TRANSPORTED TO MAUMEE AND SYLVANIA 1995 PROJECTED TO 2010		
YEAR	**MAUMEE**	**SYLVANIA**
ACTUAL DATA 1995 – 2001		
1995	398	1,348
1996	467	1,277
1997	594	1,474
1998	663	1,423
1999	734	1,487
2000	695	1,622
2001	725	1,704
PROJECTED – 2010		
2002	836	1,729
2003	892	1,793
2004	949	1,856
2005	1,005	1,919
2006	1,061	1,982
2007	1,118	2,046
2008	1,174	2,109
2009	1,230	2,172
2010	1,287	2,235
% Increase	223% Increase	65% Increase
*1995 – 2001 actual data		

Significant system resources are expended to transport prisoners to and from court. While the LCSO incurs the majority of the cost, the prosecutor's office, the public defender's office, the court, the clerk's office, and CCNO are also affected. In addition, per diem costs associated with incarceration, which include transportation, are passed on to holding jurisdictions.[4] This analysis concludes that video arraignment would help conserve a substantial amount of these resources.

BOWLING GREEN MUNICIPAL COURT PROCEEDINGS

In 1993, Bowling Green Municipal Court made use of a local cable franchise contract provision requiring the company to provide government channels. A local vendor wired video cameras, microphones, and modulators and connected the TV cable to the court and jail locations.

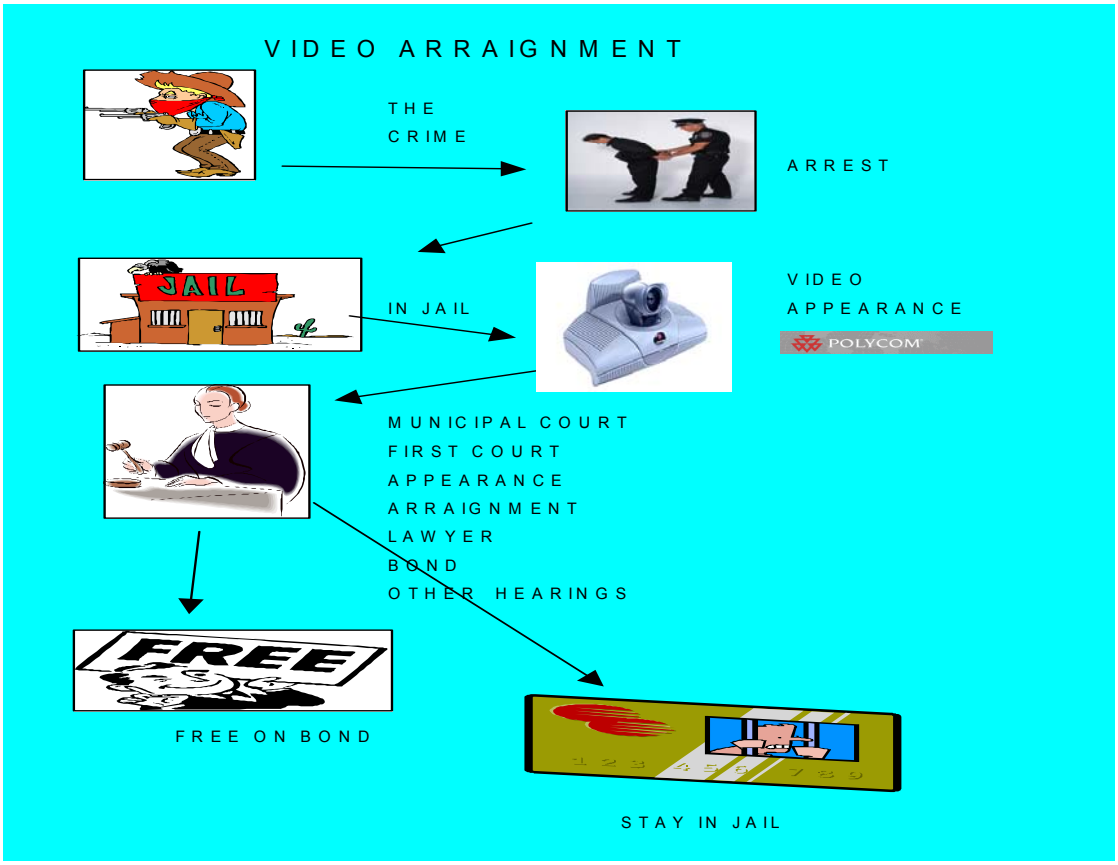
In the courtroom, the camera is focused on the judge and attorney. At the jail, the camera is on the prisoner. All participants are able to see each other on TV monitors. If defense or prosecuting attorneys are present, they stand in front of the judge's bench so that they can be seen by the prisoner. If the defense attorney would like to speak to a client privately, a telephone is provided or the attorney can travel to the jail. The video link is used for initial appearances, bond review hearings, and extradition waivers. The sessions on cable TV are not accessible to the general public.

The video arraignment process was observed on July 17, 2002. Six custody defendants were processed via video technology with the Wood County Justice Center.

[4] Of the ten prisoners discussed above, only two were being held in Maumee Municipal Court custody. The remainder of the cases were in the legal custody of other jurisdictions and were brought to Maumee on a "non-custody" charge. One Maumee defendant was held for five days before his court appearance and the other was held for one day. The City of Maumee was responsible for six days of custody costs, at a per diem rate of $87.40.

Two of the cases were for failure to pay. The judge released the defendants on an Own Recognizance bond after discussing the failure to pay. Bond and failure to appear charges were also processed in one domestic violence case and two other felony cases. In one case, both the prosecutor and the defense attorney were present in the courtroom for a plea to reduced charges and the subsequent sentencing. The judge also asked the jail to prepare a prisoner for case processing later that morning. The entire session was completed in less than 45 minutes and required the attendance of only one deputy sheriff at the jail.

While adopting video arraignment technology will not entirely eliminate the need to transport prisoners, it may reduce transportation by as much as 50 percent. The chart below depicts the system using video arraignment.



COST CONSIDERATIONS

As has been proven in many jurisdictions in Ohio and across the country, video arraignment provides a solution for the substantial drain that prisoner transportation places on system resources. Cost considerations for the deployment of video technology are dependent on two key decisions - the equipment selected and the method of video signal transmission. Video equipment requirements and four possible options for signal transmission were analyzed. Any of the four options discussed below will achieve significant cost savings for the criminal justice system in Lucas County.

VIDEO EQUIPMENT REQUIREMENTS

The video equipment needed for each site includes a minimum of one camera, a microphone, and a digital TV monitor. All other equipment associated with the project is dependent upon the method used to transmit the signal between the two locations. Regardless of the transmission method, it is recommended that the camera include a component known as a "codec". A codec is used to compress and decompress the picture so that it may be transmitted over a network.[5]

Standard video conferencing equipment can be purchased from several vendors. The Polycom Corporation is one of the leading manufacturers of this equipment.[6] The Polycom ViewStation FX model is configured with both a camera and a codec. It is estimated that this equipment would cost under $9,500 at the courthouse

[5] If extremely high network bandwidth is available, a less expensive, closed-circuit camera may be used. However, without using a codec, the system would be limited to a two-site connection.

[6] See **www.polycom.com.**

and under $6,200 at the LCCC.[7] A digital monitor and maintenance contract add another $2,000 to the cost estimate for each site. Some systems use split screen monitors so that all participants can see each other at the same time. The equipment may be installed either by NORIS or an outside contractor. If NORIS staff installs and tests the system and provides any necessary training, there will be little additional cost.

FOUR METHODS OF VIDEO SIGNAL TRANSMISSION

A cost summary for each of the four options is as follows (see attached spreadsheet for a more detailed breakdown of cost).

Type Of Transmission	Video Site Equipment Cost	One Time Installation Cost	Annual Recurring Cost	Total First Year Cost
Wireless	$15,628	$27,500	$4,000	$47,628
Full Bandwidth Cable	$15,628	$11,600	$4,000	$31,228
T-1 PRI Line	$20,628	$3,000	$5,000	$28,628
Internet DSL	$15,628	$3,000	$4,400	$23,028

Transmission Method One [Wireless]

The best video conferencing technology provides a broadcast-quality picture. Such high-quality pictures require very large transmission bandwidth. One method to achieve this rate is to install radio towers at the court and jail. Wireless costs are high and may present difficulties, depending upon the distance between sites. This type of signal can experience interference from commercial signals that may intersect with the government signal on a given frequency. Line-of-sight, signal interference, and weather interference issues make this option less appealing.

[7] If LCCC camera and monitor are installed in a secure case to prevent tampering by prisoners, cost may be higher.

Transmission Method Two [Full Bandwidth Cable]

Another option to achieve this transmission speed is to utilize cable television. Using a cable TV connection, each site must have a signal modulator, camera, microphone, and monitor. The broadcast would be conducted over two sub-channels, one to the jail and one to the courthouse. This would be a relatively inexpensive alternative, if cable service could be obtained for no cost under an existing franchise contract requirement.[8]

The disadvantage of using a cable TV system is that it may not be as flexible as the court requires. Potential future uses, such as connecting with other locations or using the video connection for remote witness testimony would be difficult to achieve.

Transmission Method Three [T-1 PRI lease lines]

The third option is a network of point-to-point, full T-1 PRI lines. A new network could be purchased, or the existing NORIS network could be upgraded to handle the video signal in addition to providing high-speed data access to the courts and police in Maumee. This option would provide a high level of security and increase data services to all Maumee NORIS users. In order to ensure that sufficient bandwidth would be available for video arraignment, the video signal would always take priority over data

[8] The Delaware County Court in Pennsylvania has 13 courtrooms at the trial court level connected to the regional jail via cable at full bandwidth TV rate. The prosecutor and the public defender's office also have the same direct connection. The jail is about ten miles from the courthouse. The county leases the cable service from the local cable company at a cost of approximately $250,000 for a ten-year contract – all equipment included. Other courts and locations in the county have video dial-up access to the system via T1-PRI lines.

transmission on the NORIS network. A portion of the network line would be dedicated to this function while the video equipment is in use.[9]

Transmission Method Four [Internet DSL]

Transmission of the video signal over the Internet, using a DSL connection, is the final option discussed. The transmission protocol used, H.323, is the wave of the future. A DSL connection, which can be obtained through Buckeye Cable, allows information to be transmitted much more rapidly than a typical dial-up connection. The video signal would be sent over the Internet in compressed data packets. To reduce the possibility of interruptions, loss of signal, and security problems, a Virtual Private Network (VPN) could be set up either by NORIS or by the service provider. A VPN would allow only authorized users access to the network. In addition, encryption at each site would ensure the signal is not intelligible to an outsider. If one service provider were used at both ends, the signal would remain on just one network, thereby improving the speed of transmission. However, it must be noted that the signal traverses the Internet and is subject to any usage problems the service provider experiences.[10]

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[9] This option could run on either H.320 or H.323 protocol. The full T-1 PRI line could achieve close to broadcast quality at between 35 fps and 70 fps. Both Stark and Summit Counties in Ohio use full T-1 lines for video arraignment.

[10] Kent State University is using Polycom equipment and H.323 protocol in their Internet video network. While their experience has been positive, there has been poor reception on occasions and the connection has been dropped when network usage is at capacity or the network is down.

SECURITY AND SIGNAL TRANMISSION RELIABILITY ISSUES

In order for all participants to have an inherent trust in the system, security issues must be explored. Additional expense will always be associated with improving security and reliability. Security must be addressed for each of the four transmission methods.

The wireless technology method is secure from point to point, but is subject to disruption by other crossing signals. There may also be service disruption caused by weather, such as high wind, lightning strikes, power outages, or equipment failure.

The cable TV method can be made secure by scrambling the signal or through an agreement with the cable company to prohibit general public access to the designated station. The technology is reliable and can be made very secure.

The dedicated T-1 PRI line method through the NORIS network is very secure. No one could access this video signal without network administrator permission. In addition, this type of lease line is normally very reliable. The addition of a Gateway and ISDN line to the network would allow users to connect with sites using ISDN technology.

The Internet DSL method is the least secure method. There is a possibility that the data packets could be intercepted. Attempts could be made to de-encrypt or simply disrupt the signal. With the use of VPN technology, this transmission method is probably as safe as making a wireless telephone call. However, the signal is still subject to all the common problems associated with the Internet. In the future, this technology may become the preferred method of sending video signals as security technology advances.

OTHER ISSUES

Other issues that should be considered are listed below:

- **Will the local legal culture accept this change?** While defense attorneys are generally opposed to this change, it has been accepted in many jurisdictions in Ohio and across the country. The defense bar should take part in discussions regarding the implementation of this new technology.

- **Is there a room at LCCC that can be set up for video arraignment?** Space is at a premium at the LCCC facility. Designating space for video arraignments may be problematic.

- **Will more than two camera inputs be needed in the courtroom?** If so, the cost of equipment and installation will increase.

- **Installation of lines in more than one location** at the courthouse will also have an associated cost. While such cost may be nominal, additional cable runs may be necessary.

- **Legal procedures, rules of court, and other standard operating procedures** would need to be modified to accommodate this change.

- **Training and training materials** must be developed.

- **All courts using the video arraignment system** would need to develop a coordinated appearance schedule to facilitate the most efficient inmate processing at LCCC.

CONCLUSION AND RECOMMENDATIONS[11]

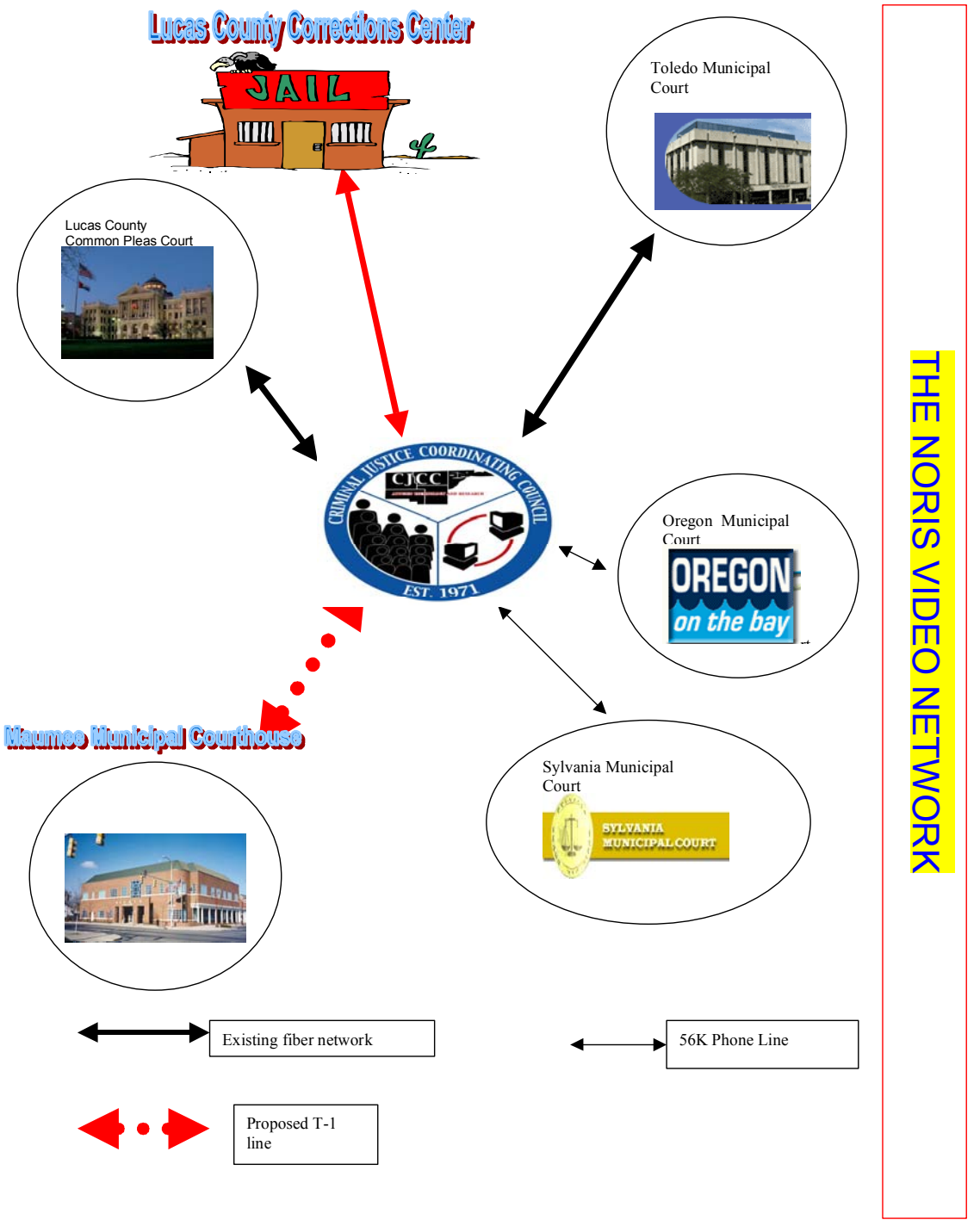
In order to expedite the deployment of video technology in Lucas County, this analysis recommends a pilot project between the Maumee Municipal Court and the LCCC. It is anticipated that the data collected from the pilot will rapidly prove the value of the technology.

Transmission Method Three (T-1 PRI lines), using the NORIS network, is recommended. This method will provide the most flexible and secure method of transmitting the data. By upgrading the NORIS network, all Maumee NORIS users will benefit from the increased speed of data transmission.

Once funding is secured, the system could be operational within 30 to 60 days. The timeframe will be dependant upon the service provider who installs the new T-1 PRI line. The first 90 days of usage should be thoroughly documented to evaluate the benefits of expanding the service to Sylvania and Oregon and possibly the Toledo Municipal Court and the Lucas County Common Pleas Court.

By upgrading the existing high-speed network connection, the pilot project can be implemented with little cost. The new NORIS video network is depicted on the following page.

[11] For additional information on jurisdictions who have been using this technology, see web sites such as: http://164.156.7.120/cgi-bin/wwwthreads/project/publish.pl; http://www.ncsconline.org/http://www.internet2.edu/; www.oar.net; http://www.itc.virginia.edu/netsys/videoconf/. http://www.co.delaware.pa.us/. www.municipalcourt.org


Lucas County Corrections Center
JAIL
Toledo Municipal Court
Lucas County Common Pleas Court
CRIMINAL JUSTICE COORDINATING COUNCIL
CJCC
EST. 1971
Oregon Municipal Court
OREGON on the bay
Maumee Municipal Courthouse
Sylvania Municipal Court
SYLVANIA MUNICIPAL COURT
THE NORIS VIDEO NETWORK
Existing fiber network
56K Phone Line
Proposed T-1 line

ATTACHMENT

DETAILED COST

BREAKDOWN